












Work Order ID 55858

February 3, 2010 12:53:59 PM

Page 1

Item ID:	D4004-041	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Side Restraint					
Start Date:	2/03/10	Start Qty:	1.00		Cust Item ID:	
Required Date:	2/10/10	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:		Date:	10-2-03	Tooling:		Date:		/ Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4004	A-PRELIM  PA3  Res A  100930	0.00							10-3-10 (3)
100	Waterjet	0.00							
	FLOW CNC Waterjet								
	2024 .063								
	Memo								
	1-Cut as per Dwg								
	Dwg Rev: PRE								
	Prog Rev: 21m								
	2-Deburr if necessary								
									(2)
110	QC2- Inspect parts off machine FAI/FAIB	0.00							10-3-10
									10-2-14
	QC	0.00							
	Quality Control								

PRELIMINARY ISSUE

See Res A released

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: 7 Date: 10/10/07

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.00.04	1	Scrap Qty 2 D4004-1, design chg. during Prelim stage.	L 10.10.06 BS166Z	Destroyed	BE 10.10.04	S 10/10/06	L 10.10.06 BS166Z	S 10/10/06

NOTE: Date & initial all entries

Work Order ID 55858

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Page 2

Item ID: D4004-041

Accept

Setup Start

Revision ID:

Stop

Item Name: Side Restraint

Start Date: 2/03/10 Start Qty: 1.00

Cust Item ID:

Required Date: 2/10/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

QC

Memo

Quality Control

0.00

QC APPROVAL

130

Bend as per dwg

0.00

Brake NC

Memo

Brake NC

Bend D4004-1 as per Dwg

C'sink asp Dwg

0.00

140

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

Quality Control

0.00

QC APPROVAL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 55858

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Page 3

Item ID: D4004-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Side Restraint

Start Date: 2/03/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/10/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

~~BR 10-02-10~~
JL 10/02/22

(2)

X3

φ

160

~~White Gloss~~ (Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

~~10/02/10~~
START: 9:30am
Temp 320°F
Fin 10:00am

X3

0

PTO →

170

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

~~7 MAR 10/02/10~~

(2X)

BR 10-3-22

(3)

φ

8/10/06

(X3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 55858

February 3, 2010 12:53:59 PM

Page 4

Item ID: D4004-041

Accept

Setup Start

Revision ID:

Stop

Item Name: Side Restraint

Start Date: 2/03/10 Start Qty: 1.00

Required Date: 2/10/10 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

180

0.00



Small Fab

Memo

0.00

Small Fab

Assemble as per dwg

190

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

200

0.00



Packaging

Identify as per dwg & Stock Location: 110

Memo


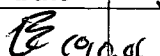
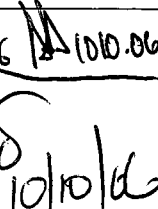

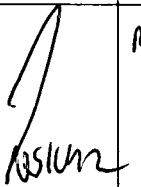
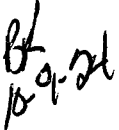


0.00

Packaging

QC APPROVAL10/9/30 (30)

W/O: 55 858		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/08/29	190	correct w/o to powder coat grey per dwg. perm change	E	10.08.06		1008-29	1008-29

Part No: D4004-041 PAR #: _____ Fault Category: Prod-eng-correct NCR: Yes No DQA: _____ Date: 1008-30
 Resolution: rework Disposition: re work QA: N/C Closed: 10/08/2010

NCR: 55858		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/08/30	# 190	Found @ inspection parts were metal ^{white} p/c which not grey according to Dwg. R.I. who called for white		- Fix w/o for future trial Scrub with 320 grit sand paper	 10/08/23 x2	 10/10/26		S 10/08/30
		LOA when create creatin w/o.		Re p/c M112588 Grey per Dwg. Start time 8:45 Finish time 9:15 temp 320°	 10/9/24	 10/9/29.		S 10/08/30

NOTE: Date & initial all entries

Work Order ID 55858

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Item ID: D4004-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Side Restraint

Start Date: 2/03/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/10/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

mf
10-10-01

POSITIVE RECALL

EFFECTIVE 10-8-02 AUTH u

RELEASED [Signature] DATE 10-8-30

Qty 3 to Rev. A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February 3, 2010 12:54:06 PM

Page 1

Work Order ID: 55858



Parent Item: D4004-041



Parent Item Name: Side Restraint

Start Date: 2/03/10

Required Date: 2/10/10

Comments: IPP rev A 09.12.15 new issue Prelim EC verified by:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M2024T3S.063		Purchased	No			100	sf	214.3696	0.2316			
2024-T3 .063 sheet												

RB 10-2-4

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

MAT

214.3696242

102942

1.5

105916

1.09

109463

0.00947368

110980

5.4854

111787

12.2847505

113866

96

113867

96

19059

2

113866
113867

RB 10-3-10 (3)

D4004-3

Manufactured No

180

Each

0.0000

1.0000



Strut Lock Bracket

55654 (3) 31



EP 10/04/19

D4004-5

Manufactured No

180

Each

0.0000

1.0000



Strap Attach Bracket

B55860 (3) 31



EP 10/04/19

D4004-7

Manufactured No

180

Each

0.0000

1.0000



Clip

B55823 (3) 31



EP 10/04/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 2

February 3, 2010 12:54:06 PM

Work Order ID: 55858



Parent Item: D4004-041



Parent Item Name: Side Restraint

Start Date: 2/03/10

Required Date: 2/10/10

Comments: IPP rev A 09.12.15 new issue Prelim EC verified by:DD

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20426AD4-5		Purchased	No			180	Each	7,550.000	3.0000	2.0		



Rivet



16737 SB 10/04/19

* MS20426AD4-4 (3x) Qty 1.0
 Batch: M15541

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST	7550
4067	1093
6733	1475
6874	4982

 6

SB 10/04/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 55858
Description: SIDE RESTRAINT		Part Number: D4004-1
Inspection Dwg: D4004-1 Rev: PA1		Page 1 of 1

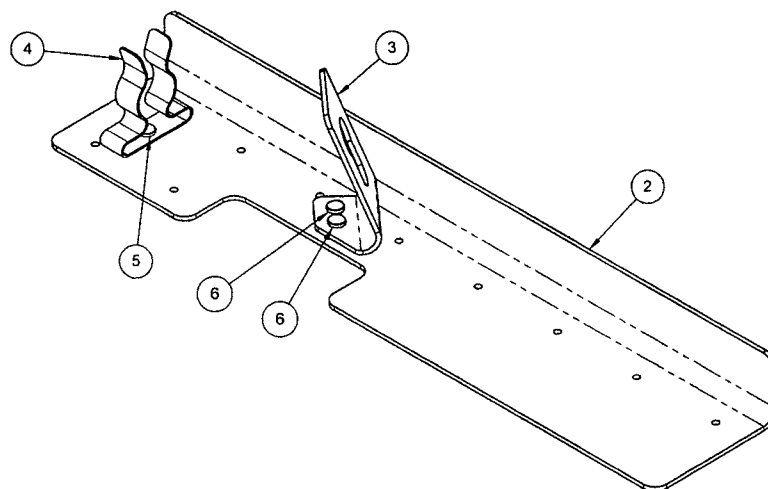
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .098	+ .004 - .001	.099	✗			
Ø .124	+ .005 - .001	.129	✗			
1.56	+/- .030	1.561	✗			
3.00	+/- .010	.298	✗			
1.18	+/- .030	1.181	✗			
.98	+/- .030	.987	✗			
.38	+/- .030	.384	✗			
.79	+/- .030	.290	✗			
.50	+/- .030	.508	✗			
1.38	+/- .030	1.378	✗			
2.40	+/- .030	2.397	✗			
.87	+/- .030	.869	✗			
5.79	+/- .030	5.791	✗			
2.99	+/- .030	2.997	✗			
10.63	+/- .030	10.633	✗			
.223	+/- .010	.223	✗			
3.65	+/- .030	3.653	✗			
.063	+/- .010	.061	✗			

Measured by: RB	Audited by: S	Prototype Approval: N/A
Date: 10-31-0	Date: 10/31/11	Date: N/A
to perform Day only		
Rev A	Date	Change
		New Issue
Revised by	Approved	
KJ/JLM		

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION	JOHN CAMERON AVIATION PART NUMBER
1	X	D4004-041	SIDE RESTRAINT ANGLE	JCA-M47-2-19
2	1	D4004-1	SIDE RESTRAINT	
3	1	D4004-3	STRUT LOCK BRACKET	
4	1	D4004-7	HOSE CLIP	
5	1	MS20426AD4-4	RIVET	
6	2	MS20426AD4-5	RIVET	



D4004-041 SIDE RESTRAINT ANGLE

PRELIMINARY ISSUE

10.02.10

NOTES:

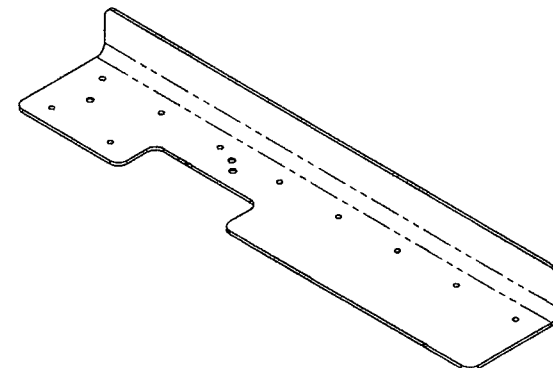
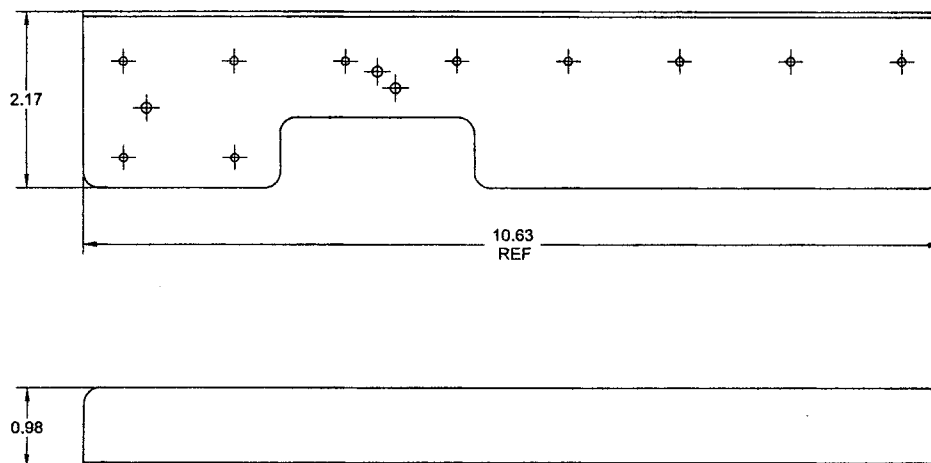
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4004-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.21 lbs

PA3	NEW ISSUE	10.02.10
REV.	DESCRIPTION	BY DATE
DESIGN		
DRAWN		
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		
DATE	10.02.10	

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4004	REV. PA3 SHEET 1 OF 11
TITLE SIDE RESTRAINT	SCALE NTS
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*check Rev + Qty.
10/2/10*

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4004-1	REF JCA-M47-2-19



R0.19







D4004-1 SIDE RESTRAINT

PRELIMINARY ISSUE

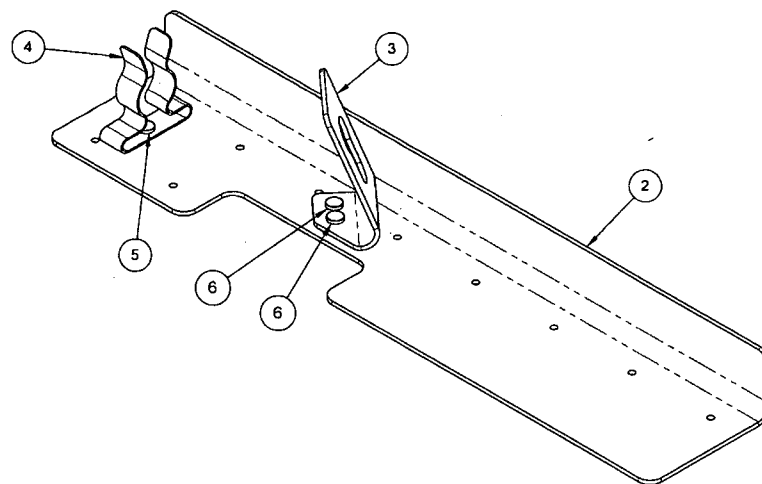
10.02.10

NOTES:

- 1) MATERIAL: MADE FROM D4004-1F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.18 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA3
MFG. APPR.		D4004	SHEET 3 OF 1
APPROVED		TITLE	SCALE
DE APPR.		SIDE RESTRAINT	NTS
DATE	10.02.10	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION	JOHN CAMERON AVIATION PART NUMBER
1	X	D4004-041	SIDE RESTRAINT ANGLE	JCA-M47-2-19
2	1	D4004-1	SIDE RESTRAINT	
3	1	D4004-3	STRUT LOCK BRACKET	
4	1	D4004-7	HOSE CLIP	
5	1	MS20426AD4-4	RIVET	
6	2	MS20426AD4-5	RIVET	



D4004-041 SIDE RESTRAINT ANGLE

35858

RELEASED
2010-05-05
MP

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4004-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.21 lbs

REV.	NEW ISSUE	DESCRIPTION	BY	DATE
DESIGN				
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	10.02.10			

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4004** REV. A
SHEET 1 OF 11
TITLE **SIDE RESTRAINT** SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries